



Road vehicles — Rear load carrier devices —

Part 4: Bicycle carriers

Véhicules routiers — Dispositif porte-charges arrière —

Partie 4: Porte-vélos

ICS 43.040.60

In accordance with the provisions of Council Resolution 15/1993 this document is circulated in the English language only.

Conformément aux dispositions de la Résolution du Conseil 15/1993, ce document est distribué en version anglaise seulement.

To expedite distribution, this document is circulated as received from the committee secretariat. ISO Central Secretariat work of editing and text composition will be undertaken at publication stage.

Pour accélérer la distribution, le présent document est distribué tel qu'il est parvenu du secrétariat du comité. Le travail de rédaction et de composition de texte sera effectué au Secrétariat central de l'ISO au stade de publication.

THIS DOCUMENT IS A DRAFT CIRCULATED FOR COMMENT AND APPROVAL. IT IS THEREFORE SUBJECT TO CHANGE AND MAY NOT BE REFERRED TO AS AN INTERNATIONAL STANDARD UNTIL PUBLISHED AS SUCH.

IN ADDITION TO THEIR EVALUATION AS BEING ACCEPTABLE FOR INDUSTRIAL, TECHNOLOGICAL, COMMERCIAL AND USER PURPOSES, DRAFT INTERNATIONAL STANDARDS MAY ON OCCASION HAVE TO BE CONSIDERED IN THE LIGHT OF THEIR POTENTIAL TO BECOME STANDARDS TO WHICH REFERENCE MAY BE MADE IN NATIONAL REGULATIONS.

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
<https://standards.iteh.ai/catalog/standards/sist/ce2a9d3f-b8a9-432c-b3af-547f87936526/iso-dis-15263-4.3>

Copyright notice

This ISO document is a Draft International Standard and is copyright-protected by ISO. Except as permitted under the applicable laws of the user's country, neither this ISO draft nor any extract from it may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, photocopying, recording or otherwise, without prior written permission being secured.

Requests for permission to reproduce should be addressed to either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Reproduction may be subject to royalty payments or a licensing agreement.

Violators may be prosecuted.

Contents

Page

Foreword	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Requirements	3
4.1 Lighting – Signalling	3
4.2 Rear license plate	3
4.3 Resistance to corrosion	4
4.4 Resistance of materials	4
4.5 Overhang and external shape	4
4.6 Resistance to the lifting force, F_a	4
4.7 Resistance to the longitudinal force, F_l	5
4.8 Resistance when running on a sleeping policeman	6
4.9 Resistance when running on Belgium blocks	6
4.10 Resistance of straps for fixating the rear bicycles carrier (textile straps, belt, metallic straps) to the elongation force, F_s	7
4.10.1 Resistance of threads (textile straps, metallic...)	7
4.10.2 Resistance of mechanical or thread straps fixing parts in using configuration	7
4.11 Compatibility rear bicycles carrier / vehicle(s) and rear bicycles carrier / towing device(s) – mount ability	7
4.12 Bicycle(s) fixing devices	7
5 Test samples	7
6 Test sequence	8
7 Test method	8
7.1 General	8
7.1.1 Tolerance	8
7.1.2 General testing conditions	8
7.2 Description of the test facilities	9
7.2.1 Test bicycle	9
7.2.2 Static test bench	10
7.2.3 Description of the Belgium blocks test track (according to M.I.R.A (Motor Industry Research Association) Bulletin III/49 - construction of the "Belgian Block"	10
7.2.4 Description of the sleeping policeman	11
7.3 Preconditioning	11
7.4 Mount ability test	12
7.5 Dynamic tests	12
7.6 Static tests	13
7.6.1 General	13
7.6.2 Nominal value of the forces	13
7.6.3 Test procedure	14
7.7 Strap test ((textile straps, belt, metallic straps)	15
7.7.1 Traction speed	15
7.7.2 Thread test (textile straps, belt, metallic straps...)	15
7.7.3 Test of mechanical or thread straps fixing parts in using configuration	15
7.8 Resistance to corrosion	15
8 Marking	15
9 Instruction for fitting and use	15
9.1 Fitting instructions	16

9.2	Instructions for use	16
9.3	Warning.....	16
Annex A (informative) Types of rear bicycles carriers		18
Annex B (normative) Tridimensional reference system.....		24
Annex C (informative) Lighting and signalling.....		25
Annex D (informative) Rear License plate		26
Annex E (normative) Synoptic of the test sequence and approval/rejection procedure.....		27
E.1	Synoptic of the test sequence.....	27
E.2	Static tests – Approval/rejection procedure	28
E.2.1	Case n°1.....	28
E.2.2	Case n°2.....	29
E.2.3	Case n°3.....	29
E.2.4	Case n°4.....	30
Annex F (normative) Required tightening torques		31
Annex G	(normative) Test bench for static tests	32
Annex H (informative) Measurement of displacements		36
Bibliographie.....		38

iTeh STANDARD PREVIEW
 (standards.iteh.ai)
 Full standard:
<https://standards.iteh.ai/catalog/standards/sist/ce2a9d3f-b8a9-432c-b3af-547f87936526/iso-dis-15263-4.3>

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 15263 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 14, *Exterior fittings*.

ITeH STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
<https://standards.iteh.ai/catalog/standards/sist/b8a9-432c-b3af-547f87936526/iso-dis-15263-4>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Full standard:
<https://standards.iteh.ai/catalog/standards/sist/ce2a9d3f-b8a9-432c-b3af-547f87936526/iso-dis-15263-4.3>

Road vehicles — Rear load carrier devices —

Part 4: Bicycle carriers

1 Scope

ISO 15263 specifies the minimum safety requirements for rear bicycle carrier devices intended for fitment on the rears of passenger cars and light commercial vehicles with a maximum authorised total mass up to 3,5 t as defined in ISO 1176.

It establishes technical specifications and test methods, which offer both the users of the rear bicycle carrier devices and road users, a minimum level of safety when the rear bicycle carrier devices are being used in accordance with the manufacturer instructions.

Moreover, the requirements of ISO 15263 complement the provisions of Directive 74/483/EEC and its successive amendments concerning these products.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 1176:1996, *Road vehicles – Masses – Vocabulary and Codes*

ISO 9227:1990, *Corrosion tests in artificial atmospheres – Salt spray tests*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1

rear bicycles carrier

any device intended for carrying bicycle(s) on rear of a vehicle. A non exhaustive list of examples is given in annex A figures A1 to A10

a) rear bicycles carrier devices fitted on the trunk

rear carrier device designed to carry bicycles on the trunk of a vehicle. A non exhaustive list of examples is given in annex A figures A3 and A4

b) rear bicycles carriers devices fitted on the hatch

rear carrier device designed to carry bicycles on the hatch of a vehicle. A non exhaustive list of examples is given in annex A figures A5 and A6

c) rear bicycle carrier devices fitted on towing ball or plate

rear carrier device designed to carry bicycles on the towing ball or plate of a vehicle. A non exhaustive list of examples is given in annex A figures A7 and A8

d) rear bicycle carrier devices fitted on spare wheel

rear carrier device designed to carry bicycles on the spare wheel. A non exhaustive list of examples is given in annex A figures A9

e) rear bicycle carrier devices fitted on chassis

rear carrier device designed to carry bicycles on the chassis of a vehicle. A non exhaustive list of examples is given in annex A figures A10

3.2

maximum rear bicycle carrier device capacity, N_c

maximum rear bicycle carrier capacity expressed as a number of bicycles as defined by the rear bicycle carrier device manufacturer

3.3

mass of the test bicycle, m_{tb}

conventional mass of representative test bicycle, in kilograms

3.4

lifting force, F_a

force applied during testing to simulate the vertical components of the force caused by the upward, $+F_a$, and the downward, $-F_a$, vertical effect of the load as defined in figure 1, in Newtons

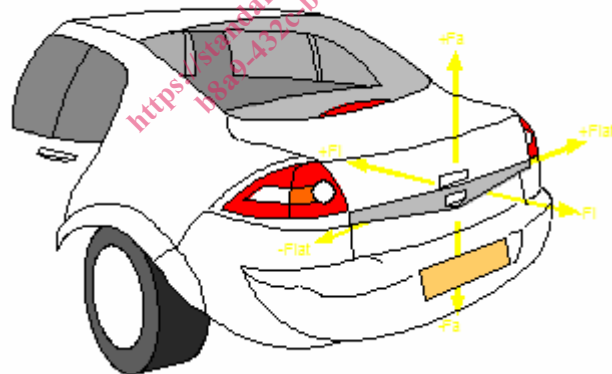


Figure 1 — Application points of F_a , F_1 , F_{1at} forces

NOTE The application points of the forces F_a , F_1 , F_{1at} are given in reference to the tridimensional reference system the schema of which is given in annex B

3.5

longitudinal force, F_l

longitudinal force applied during testing to simulate the horizontal components of the front, $+F_l$, and the rear, F_l , forces caused by the load as defined in figure 1, in Newtons.

3.6**lateral slide force, F_{lat}**

force applied during testing to simulate the horizontal components of the right, $-F_{lat}$, and left, $+F_{lat}$, lateral forces caused by the load as defined in figure 1, in Newtons

3.7**strap elongation force (textile straps, belt, metallic straps), F_s**

force applied during testing to simulate the elongation effort caused by the load to the straps, in Newtons

3.8**residual deflection in a given point, D**

difference between the position before and after each steps of the test, of the contact points of the rear-bicycles carrier to vehicle, measured in millimetres

NOTE a contact point can be a supporting point, a fixation point or all other connecting points

3.9**displacement of the bicycle, d**

difference between the position before and after each steps of the test, of each bicycle on the bicycle support at each contacting points, measured in millimetres

3.10**relative displacement of the internal components of rear-bicycles carrier devices, e**

difference between the position before and after each steps of the test, of the component ensuring the interface with the vehicle and the component of the rear bicycle carrier on which it is fitted, measured in millimetres

4 Requirements**4.1 Lighting – Signalling**

If light devices are significantly hidden by the rear bicycle carrier or by the bicycle (s) itself, examples are given in informative annex C, The manufacturer shall advise the costumer by a warning in instructions of use (see 9.3) to duplicate the corresponding light devices on the rear bicycle carrier, except the third brake lamp and reversing lights.

IMPORTANT — All rear lights shall be type approved according to national regulation

WARNING — In any case, national law shall be taken into account while using the carrier. The manufacturer shall advise the costumer by a warning in instructions of use accordingly.

SAFETY PRECAUTIONS — When a lighting – signalling system is duplicated, it is important that the electrical connexions shall be made in accordance with the state of the art and the recommendation of the vehicle manufacturer.

4.2 Rear license plate

If the license plate is partly hidden by the rear bicycle carrier or by the bicycle(s) itself, it is necessary to mount it visible or duplicate (depending national regulation) it on the rear bicycle carrier, examples are given in informative annex D. The manufacturer shall advise the costumer by a warning in instructions of use (see 9.3) to duplicate the license plate and its lighting devices on the rear bicycle carrier.

WARNING — In any case, national law shall be taken into account while using the carrier. The manufacturer shall advise the costumer by a warning in instructions of use accordingly.

WARNING — License plate dimensions and lighting system shall be according to national regulations.

4.3 Resistance to corrosion

When tested in accordance with 7.8, no active corrosion¹⁾ of functional parts shall appear during the test.

4.4 Resistance of materials

The materials used shall allow the rear bicycle carrier device to fulfil the requirements of 4.6 to 4.8 stated in a range of exterior temperature between -20°C to $+60^{\circ}\text{C}$.

This shall be shown by one of the following methods:

- a) material certification and report²⁾ showing that the design is suitable for the intended purposes;
- b) by direct testing under above mentioned extreme conditions, according to clause 7;
- c) reference to applicable material standards.

4.5 Overhang and external shape

The external radius of all contactable components shall conform to EEC Directive 74/483 including all amendments. In any case, national law shall be taken into account while using the rear bicycles carrier.

4.6 Resistance to the lifting force, F_a

When tested in accordance with 7.6, on completion of the test under F_a , the following requirements shall be met:

- a) The bicycles shall remain fixed on the rear bicycle carrier;
- b) The bicycles and the rear bicycle carrier shall remain fixed on the test device;
- c) No braking of parts shall occur;
- d) The liaison between the rear bicycle carrier and the vehicle shall not be reduced. Residual deflection, D , shall not exceed 20 mm and for rear bicycles carrier fitted on towing ball 3° for δ , α and β ;
- e) Residual deflection, d , shall not exceed 20 mm;
- f) Residual deflection, e , of the components at the interface between the rear bicycles carrier and the vehicle shall not exceed 5 mm;
- g) Permanent deformation of the main functional parts (i.e. no cosmetic parts) shall not exceed 5% of the length of the elements, except for straps (textile straps, belt, metallic straps) which are checked according to 4.11;
- h) The sliding of each strap³⁾ in its blocking devices shall not exceed 2 mm.

1) For example, zinc oxide and alumina are not considered as active corrosion signs

2) For example, technical specification of the material or sample provided by the manufacturer or attestation from the manufacturer

3) For example, straps used for fixing the bicycles on the rear bicycles carrier device, the rear bicycle carrier device on the vehicle...

NOTE Examples of measurement of displacement is given in annex H

4.7 Resistance to the longitudinal force, F_l

When tested in accordance with 7.6, on completion of the test under F_l , the following requirements shall be met:

- a) The bicycles shall remain fixed on the rear bicycle carrier;
- b) The bicycles and the rear bicycle carrier shall remain fixed on the test device;
- c) No braking of parts shall occur;
- d) The liaison between the rear bicycle carrier and the vehicle shall not be reduced. Residual deflection, D , shall not exceed 20 mm and for rear carrier bicycles fitted on towing ball 3° for δ , α and β ;
- e) Residual deflection, d , shall not exceed 20 mm;
- f) Residual deflection, e , of the components at the interface between the rear bicycles carrier and the vehicle shall not exceed 5 mm;
- g) Permanent deformation of the main functional parts (i.e. no cosmetic parts) shall not exceed 5% of the length of the elements, except for straps (textile straps, belt, metallic straps) which are checked according to 4.11;
- h) The sliding of each strap⁴⁾ in its blocking devices shall not exceed 2 mm.

NOTE Examples of measurement of displacement is given in annex H

When tested in accordance with 7.6, on completion of the test under F_{lat} , the following requirements shall be met:

- a) The bicycles shall remain fixed on the rear bicycle carrier;
- b) The bicycles and the rear bicycle carrier shall remain fixed on the test device;
- c) No braking of parts shall occur;
- d) The liaison between the rear bicycle carrier and the vehicle shall not be reduced. Residual deflection, D , shall not exceed 20 mm and for rear carrier bicycles fitted on towing ball 3° for δ , α and β ;
- e) Residual deflection, d , shall not exceed 20 mm;
- f) Residual deflection, e , of the components at the interface between the rear bicycles carrier and the vehicle shall not exceed 5 mm;
- g) Permanent deformation of the main functional parts (i.e. no cosmetic parts) shall not exceed 5% of the length of the elements, except for straps (textile straps, belt, metallic straps) which are checked according to 4.11;
- h) The sliding of each strap⁵⁾ in its blocking devices shall not exceed 2 mm.

4) For example, straps used for fixing the bicycles on the rear bicycles carrier device, the rear bicycle carrier device on the vehicle...

5) For example, straps used for fixing the bicycles on the rear bicycles carrier device, the rear bicycle carrier device on the vehicle...

NOTE Examples of measurement of displacement is given in annex H

4.8 Resistance when running on a sleeping policeman

When tested in accordance with 7.5, on completion of the test, the following requirements shall be met:

- a) The bicycles shall remain fixed on the rear bicycle carrier;
- b) The bicycles and the rear bicycle carrier shall remain fixed on the vehicle;
- c) No braking of parts shall occur;
- d) The liaison between the rear bicycle carrier and the vehicle shall not be reduced. Residual deflection, D , shall not exceed 20 mm and for rear carrier bicycles fitted on towing ball 3° for δ , α and β ;
- e) Residual deflection, d , shall not exceed 20 mm;
- f) Residual deflection, e , of the components at the interface between the rear bicycles carrier and the vehicle shall not exceed 5 mm;
- g) Permanent deformation of the main functional parts (i.e. no cosmetic parts) shall not exceed 5% of the length of the elements, except for straps (textile straps, belt, metallic straps) which are checked according to 4.11;
- h) The sliding of each strap in its blocking devices shall not exceed 2 mm;
- i) The bicycle(s) and the rear bicycles carrier shall not hit the ground during the test.

NOTE Examples of measurement of displacement is given in annex H

NOTE As an alternative, a test bench method can be used if the equivalency with the described road test is demonstrated for the rear bicycles carriers

4.9 Resistance when running on Belgium blocks

When tested in accordance with 7.5, on completion of the test, the following requirements shall be met:

- a) The bicycles shall remain fixed on the rear bicycle carrier;
- b) The bicycles and the rear bicycle carrier shall remain fixed on the vehicle;
- c) No braking of parts shall occur;
- d) The liaison between the rear bicycle carrier and the vehicle shall not be reduced. Residual deflection, D , shall not exceed 20 mm and for rear carrier bicycles fitted on towing ball 3° for δ , α and β ;
- e) Residual deflection, d , shall not exceed 20 mm;
- f) Residual deflection, e , of the components at the interface between the rear bicycles carrier and the vehicle shall not exceed 5 mm;
- g) Permanent deformation of the main functional parts (i.e. no cosmetic parts) shall not exceed 5% of the length of the elements, except for straps (textile straps, belt, metallic straps) which are checked according to 4.11;
- h) The sliding of each strap in its blocking devices shall not exceed 2 mm;

NOTE Examples of measurement of displacement are given in annex H